

Fingernail lunula luminescence in COVID-19 patients: Is it a favipiravir-related reaction or a novel manifestation of coronavirus infection

Dear Editor,

Coronavirus disease 2019 (COVID-19) pandemic continues to spread across the world since early December 2019. To date, the number of confirmed COVID-19 cases has exceeded 70 million according to WHO data. At the present time, Turkey is among the top countries with highest daily new cases of COVID-19.¹ Although hydroxychloroquine was the first recommended drug in COVID-19 at the beginning of the pandemic, nowadays, favipiravir is the most common

recommended drug that is used for COVID-19 in Turkey. Currently, we observed numerous COVID-19 patients who have fingernail lunula luminescence under wood lamps. There are also some viral videos on the Internet from UV-based industry workers who previously had COVID-19 that claim fingernail lunula luminescence is a novel manifestation of COVID-19 under UV light.

The current Turkish COVID-19 treatment guideline recommends giving favipiravir 2×1600 mg/day on the first day and then 2×600 mg/day for 9 days in symptomatic COVID-19 patients.² According to our data, COVID-19 patients not receiving favipiravir did not show luminescence under the wood lamp. On the other hand, almost all patients receiving favipiravir had fingernail lunula luminescence (Figure 1). The luminescence may last until 2 weeks after the onset of the favipiravir. However, there should be a long-term follow-up to detect the exact luminescence time.

Favipiravir is an anti-viral agent that inhibits the RNA-dependent RNA polymerase. Its half-life is about 5 hours. Favipiravir tablets have certain inactive ingredients including titanium dioxide and yellow ferric oxide. Titanium dioxide and yellow ferric oxide have photostabilization effects to protect favipiravir from light sensitivity. In addition, titanium dioxide and ferric oxides are strong absorbers of radiation wavelengths below 365 and 400 nm, respectively.^{3,4} These absorption wavelengths are related to both UV and wood lamp-related wavelengths. As it is known that peak absorption wavelengths of UVA and UVB lamps are under 400 nm. In addition, barium silicate and 9% nickel oxide-based wood lamp absorbs light between 320 and 360 nm with a peak at 365 nm.

Given these pieces of information, we believe that nail luminescence under UV or wood lamps is not related the COVID-19. Certain inactive ingredients such as titanium dioxide and yellow ferric oxide are the possible responsible agents for fingernail lunula luminescence in COVID-19 patients. Further studies are required to illuminate the exact cause of fingernail lunula luminescence of COVID-19 patients. Herein, we discussed fingernail lunula luminescences under Wood and UV lamps in COVID-19 patients.

CONFLICT OF INTEREST

None declared.

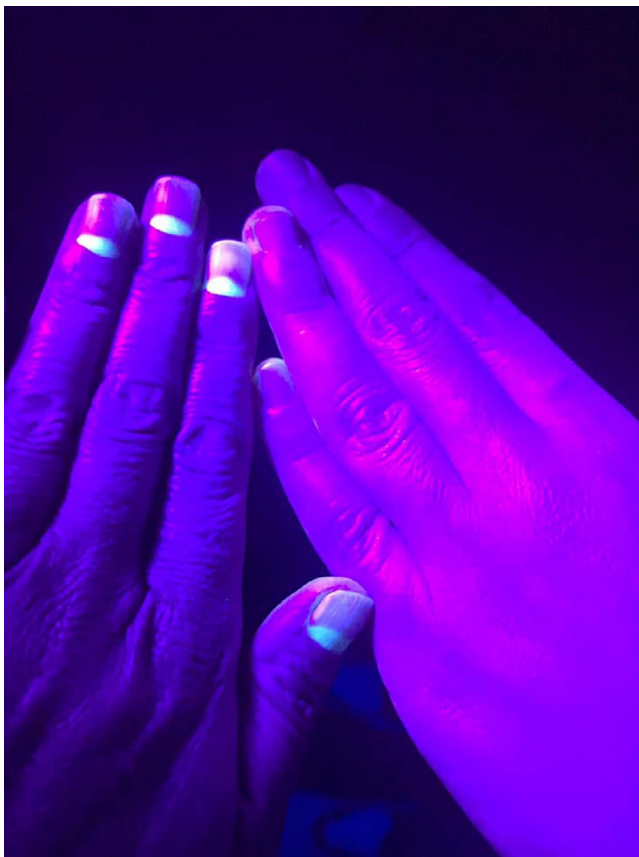


FIGURE 1 Two real-time polymerase chain reaction-confirmed COVID-19 cases. A patient receiving favipiravir (left) and a patient not receiving favipiravir (right)

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